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EXAMINER	
ROCHE, TRENTON J	

ART UNIT	PAPER NUMBER
2124	4

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/761,152	WARD ET AL.	
	Examiner	Art Unit	
	Trent J Roche	2124	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 January 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 April 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. Claims 1-23 have been examined.

Claim Objections

2. Claim 10 is objected to because of the following informalities: there appears to be a typo in the use of the word 'computing' in the phrase "computing said application with a different set of compiler options." Appropriate correction is required. For purposes of examination, this will be interpreted to read "compiling said application with a different set of compiler options."

3. Claim 15 is objected to because of the following informalities: there is a grammatical error in the phrase "wherein said generating solutions step generates possible solutions step generates possible solutions...". Appropriate correction is required. For purposes of examination, this will be interpreted to read "wherein said generating solutions step generates possible solutions..."

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 2, 13 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claim 2 recites the limitation "set of computer options" in line 1. There is insufficient antecedent basis for this limitation in the claim. For purposes of examination this will be interpreted to read "set of compiler options."

7. Claims 13 and 14 recite the limitation "said generating step" in line 1. There is insufficient antecedent basis for this limitation in the claim. It is unclear as to which generating step the claims are referring to in claim 10. For purposes of examination, this will be interpreted to read "said generating solutions step..."

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1, 3, 6-11, 14, 15 and 20-23 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,966,538 to Granston et al, hereafter referred to as Granston.

Regarding claim 1:

Granston teaches:

- a method for compiling an application program in an optimum manner ("a method and apparatus for automatically determining which compiler options should be used in compiling a computer program" in col. 1 lines 53-55)
- compiling said application with a different set of compiler options to provide two or more executables, generating profile information from said executables ("the present invention utilizes information obtained from interviewing the computer user, compile-time information obtained during one or more compilations of the program, and profile information collected at run time" in col. 1 line 67 to col. 2 line 3)

- selecting compiler options for said application program based upon said profile information ("the present invention may also utilize profile information obtained during execution of the program to determine which compiler options should be applied when compiling a particular application...the user makes the appropriate selection to cause the CPU to compile with the new options" in col. 4 lines 35-38 and 61-64)

as claimed.

Regarding claim 3:

Granston teaches:

- a method for compiling an application program in an optimum manner ("a method and apparatus for automatically determining which compiler options should be used in compiling a computer program" in col. 1 lines 53-55)
- compiling said application with a first set of compiler options to provide a first executable, compiling said application with a second set of compiler options to provide a second executable, generating profile information from said first and second executables ("the present invention utilizes information obtained from interviewing the computer user, compile-time information obtained during one or more compilations of the program, and profile information collected at run time" in col. 1 line 67 to col. 2 line 3)
- selecting compiler options for each function of said application program so as to optimize said application program as a function of desired profile information ("the present invention may also utilize profile information obtained during execution of the program to determine which compiler options should be applied when compiling a particular application...the user

makes the appropriate selection to cause the CPU to compile with the new options" in col. 4 lines 35-38 and 61-64)

as claimed.

Regarding claim 6:

The rejection of claim 3 is incorporated, and further, Granston teaches analyzing profile information against user supplied constraints as claimed ("This user information may include...the user's failure tolerance and compile-time tolerance..." in col. 4 lines 13-16)

Regarding claim 7:

Granston teaches:

- a solution space generator ("apparatus for automatically determining which compiler options should be used in compiling a computer program" in col. 1 lines 53-55)
- means for reading profiler information, and means for generating useful solutions of a solution set derived from profiler information ("The present invention then utilizes this profile information in combination with any compiler-time and user information to provide either a single set of compiler option recommendations that are tailored for the program as a whole, or to provide recommendations for each individual module of the program" in col. 4 lines 49-54)

as claimed.

Regarding claim 8:

The rejection of claim 7 is incorporated, and further, Granston teaches providing a display of useful solutions as claimed ("The CPU then displays the recommendations to the user on display 8" in col. 4 lines 60-61)

Regarding claim 9:

The rejection of claim 8 is incorporated, and further, Granston teaches selecting of one said solutions as claimed ("the user makes the appropriate selection to cause the CPU to compile with the new options..." in col. 4 lines 62-64)

Regarding claim 10:

Granston teaches:

- a method for compiling an application program ("a method and apparatus for automatically determining which compiler options should be used in compiling a computer program" in col. 1 lines 53-55)
- computing said application with a different set of compiler options to provide two or more executables, generating profile information from said executables ("the present invention utilizes information obtained from interviewing the computer user, compile-time information obtained during one or more compilations of the program, and profile information collected at run time" in col. 1 line 67 to col. 2 line 3)
- applying said profile information to a solver, generating sets of useful solutions from said profile information wherein the sets have methods of compiling at the function level ("The present invention then utilizes this profile information in combination with any compile-time and user information to provide either a single set of compiler option

recommendations that are tailored for the program as a whole, or to provide recommendations for each individual module of the program" in col. 4 lines 49-54)

- selecting compiler options for said application program using said useful solutions for subsequent compiling of said application ("the user makes the appropriate selection to cause the CPU to compile with the new options" in col. 4 lines 61-64)

as claimed.

Regarding claim 11:

The rejection of claim 10 is incorporated, and further, Granston teaches said selecting step including displaying as claimed ("The CPU then displays the recommendations to the user on display 8...If the user decides to compile with the recommended options, the user makes the appropriate selection to cause CPU to compile with the new options..." in col. 4 lines 60-64)

Regarding claim 14:

The rejection of claim 10 is incorporated, and further, Granston teaches linear programming and heuristics as claimed ("In accordance with the present invention, the rule sets were developed using performance-tuning knowledge...the rule set utilized by the present invention will depend on the particular application, or application type, being compiled" in col. 4 lines 27-34)

Regarding claim 15:

The rejection of claim 10 is incorporated, and further, Granston teaches said generating solutions step as claimed ("the rule set utilized by the present invention will depend on the particular

application, or application type, being compiled" in col. 4 lines 32-34. The rules are what filter the recommended solutions.)

Regarding claim 20:

Granston teaches:

- a user interface for displaying and controlling the results of compiling an application program ("the user is presented with a graphical user interface via display from which the user makes appropriate selections" in col. 3 lines 33-35)
- a compiling having a preselected number of compiling options ("the CPU...utilizes this compile-time information to automatically determine and recommend compiler options" in col. 4 lines 10-12)
- a module for displaying at least a portion of solution information as a function of said selected compiler options and for selecting at least one displayed solution (Note col. 4 lines 49-67, specifically ("the user makes the appropriate selection to cause the CPU to compile with the new options...")
- a module for outputting, for a selected solution, compiler information to allow for said application program to be compiled in a manner consistent with said selected solution ("the user makes the appropriate selection to cause CPU to compile with the new options...Once the program has been compiled with the new options, it can be executed with the new options..." in col. 4 lines 62-66)

as claimed.

Regarding claim 21:

Granston teaches:

- a user interface for displaying and controlling the results of compiling an application program ("the user is presented with a graphical user interface via display from which the user makes appropriate selections" in col. 3 lines 33-35)
- a compiling having a preselected number of compiling options ("the CPU...utilizes this compile-time information to automatically determine and recommend compiler options" in col. 4 lines 10-12)
- a module for displaying at least a portion of information as a function of selected performance metrics and for selecting at least one displayed solution (Note col. 4 lines 49-67, specifically ("the user makes the appropriate selection to cause the CPU to compile with the new options...")
- a module for outputting, for a selected solution, compiler information to allow for said application program to be compiled in a manner consistent with said selected solution ("the user makes the appropriate selection to cause CPU to compile with the new options...Once the program has been compiled with the new options, it can be executed with the new options..." in col. 4 lines 62-66)

as claimed.

Regarding claim 22:

The rejection of claim 21 is incorporated, and further, Granston teaches a module for selecting and fixing instructions as claimed ("If the information utilized by the CPU includes user information, then the set of rules utilized by the CPU will depend on the particular type of application being compiled, a description of which is entered by the user via the user interface" in col. 4 lines 23-27)

Regarding claim 23:

The rejection of claim 22 is incorporated, and further, Granston teaches a module for compiling said application program in a manner consistent with said selected solution as claimed ("the user makes the appropriate selection to cause CPU to compile with the new options...Once the program has been compiled with the new options, it can be executed with the new options..." in col. 4 lines 62-66)

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 2, 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,966,538 to Granston et al, hereafter referred to as Granston, in view of U.S. Patent 5,535,391 to Hejlsberg et al, hereafter referred to as Hejlsberg.

Regarding claim 2:

The rejection of claim 1 is incorporated, and further, Granston does not specifically disclose compiler options for speed and code size. Hejlsberg discloses a in an analogous optimization system a compiler with options for code size and speed (Note Parameters –O2 and –O1 in col. 5 line 65 to col. 6 line 8. –O2 relates to generating the fastest code possible, while –O1 relates to generating the

smallest code possible). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the optimization options of Hejlsberg with the automatically optimizing compiler of Granston, enabled via the addition of instructional code, as this would allow an increase in efficiency in the runtime of the application program in the system of Granston.

Regarding claim 4:

The rejection of claim 3 is incorporated, and further, Granston does not specifically disclose a compiler option for speed. Hejlsberg discloses a in an analogous optimization system a compiler with options for code size and speed (Note Parameters –O2 and –O1 in col. 5 line 65 to col. 6 line 8. –O2 relates to generating the fastest code possible, while –O1 relates to generating the smallest code possible). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the optimization options of Hejlsberg with the automatically optimizing compiler of Granston, enabled via the addition of instructional code, as this would allow an increase in efficiency in the runtime of the application program in the system of Granston.

Regarding claim 5:

The rejection of claim 3 is incorporated, and further, Granston does not specifically disclose a compiler option for code size. Hejlsberg discloses a in an analogous optimization system a compiler with options for code size and speed (Note Parameters –O2 and –O1 in col. 5 line 65 to col. 6 line 8. –O2 relates to generating the fastest code possible, while –O1 relates to generating the smallest code possible). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the optimization options of Hejlsberg with the automatically optimizing

compiler of Granston, enabled via the addition of instructional code, as this would allow an increase in efficiency in the runtime of the application program in the system of Granston.

12. Claims 12, 13 and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,966,538 to Granston et al, hereafter referred to as Granston, in view of U.S. Patent 5,189,633 to Bonadio.

Regarding claim 12:

The rejection of claim 10 is incorporated, and further, Granston does not specifically disclose generating an efficient frontier curve of optimum solution points as claimed. Bonadio discloses in an analogous solution deriving computer system the method of generating a curve of solution points (Note Fig. 5 and the corresponding section of the disclosure). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the curve displaying ability of Bonadio, enabled via the addition of instructional code, with the user interface as disclosed in Granston, as this would enable a user to easily view the variety of solutions that are recommended by the system disclosed in Granston.

Regarding claim 13:

The rejection of claim 12 is incorporated, and further, Bonadio discloses the use of a zoom window in conjunction with a graph ("to zoom in or out..." in col. 8 line 21)

Regarding claim 17:

The rejection of claim 10 is incorporated, and further, Granston does not specifically disclose displaying a solution point on a solution point curve as claimed. Bonadio discloses in an analogous solution deriving computer system displaying a solution point on a solution point curve (Note Fig. 5 and the corresponding section of the disclosure). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use solution curve of Bonadio, enabled via the addition of instructional code, with the user interface as disclosed in Granston, as this would enable a user to easily view the variety of solutions that are recommended by the system disclosed in Granston.

Regarding claim 18:

The rejection of claim 10 is incorporated, and further, Granston does not specifically disclose displaying a solution point on a solution point curve as claimed. Bonadio discloses in an analogous solution deriving computer system displaying a solution point on a solution point curve, and redisplaying the results as claimed (Note Fig. 5 and the corresponding section of the disclosure. The user may "manipulate the internal structure of the graph" in lines 22-23, thereby requiring that the solution curve be redisplayed following manipulation). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use solution curve of Bonadio, enabled via the addition of instructional code, with the user interface as disclosed in Granston, as this would enable a user to easily view the variety of solutions that are recommended by the system disclosed in Granston.

Regarding claim 19:

The rejection of claim 18 is incorporated, and further, Bonadio discloses displaying by function differences between results as claimed ("to manipulate the internal structure of the graph" in col. 8 lines 22-23.)

13. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,966,538 to Granston et al, hereafter referred to as Granston, in view of U.S. Patent 5,978,795 to Poutanen et al, hereafter referred to as Poutanen.

Regarding claim 16:

The rejection of claim 10 is incorporated, and further, Granston does not disclose a search tree as claimed. Poutanen discloses a search tree with node processing as claimed ("The string at the current position is then compared with the string at the previous position, and, if larger, the left pointer of the new root node points to the node of the previous position, and the left pointer of the node of the previous position is maintained so as to point to any smaller children..." in col. 2 lines 51-56). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the search tree processing method of Poutanen with the compiler recommendation system of Granston, as this would provide an improved binary search method, further increasing the performance of the system disclosed by Granston.

Double Patenting

14. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214

USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

15. Claims 1-11, 17 and 20-23 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 2-4 of copending Application No. 09/510,217. Although the conflicting claims are not identical, they are not patentably distinct from each other because they are directed to substantially the same invention and recites only obvious differences which would have been obvious to one of ordinary skill in the art at the time of invention.

Instant claim:	Copending claim:
1	2
2	2
3	2
4	2
5	2
6	2
7	2
8	2
9	2
10	2
11	2
12	2
13	2
14	2
15	2
16	2
17	2
18	2
19	2
20	1
21	1
22	3
23	4

Regarding claim 1:

Copending application claim 2 discloses a method for compiling, generating, and selecting as claimed in instant claim 1. The instant claim does not recite the step of outputting compiler information as recited in claim 2 of the copending application. It would have been obvious to one of ordinary skill in the art at the time the invention was made to omit the step of outputting compiler information from the method recited in the copending claim for the purpose of expediting the method.

Regarding claim 2:

The rejection of claim 1 is incorporated, and further, the instant claim recites the additional limitation regarding compiler options which corresponds to the performance metrics in copending claim 2.

Regarding claim 3-6

Copending application 2 recites a method for compiling an application program with a first set and a second set of compiler options (the program is first compiled with a set of options, profiled, and later compiled with the selected set of options), selecting compiler options, said options consisting of performance metrics, and analyzing said profile information against user supplied constraints (creating a profiler database, as a function of selected compiler options) as recited in instant claims 3-6. The instant claims do not recite the steps of displaying solution information and outputting compiler information as recited in copending claim 2. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method recited in the

copending claim by omitting the steps of displaying solution information and outputting compiler information, for the purpose of expediting the method.

Regarding claim 7-9:

Copending application claim 2 recites a generator for reading profile information, generating useful solutions, displaying useful solutions and selecting one of said solutions as claimed in instant claims 7-9. The instant claims do not recite the step of outputting compiler information as recited in the copending claim. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method recited in the copending claim copending claim by omitting the step of outputting compiler information for the purpose of expediting the process.

Regarding claim 10, 11 and 17:

Copending application claim 2 recites a method for compiling an application, generating profile information, applying profile information, generating solutions, displaying and selecting solutions as claimed in instant claims 10, 11 and 17. The instant claims do not recite the step of outputting compiler information as recited in the copending application. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method recited in the copending claim by omitting the steps of displaying solution information and outputting compiler information, for the purpose of expediting the method.

Regarding claims 20 and 21

Copending application claim 1 recites a user interface for displaying and outputting as claimed in instant claims 20 and 21. Further, performance metrics are a type of selected compiler options. It

would have been obvious to one of ordinary skill in the art at the time the invention was made to include performance metrics as a type of selectable compiler option, as this would create an executable with better performance. The instant claims do not recite the steps of providing extracted solution points as recited in copending claim 1. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method recited in the copending claim by omitting the steps of providing extracted solution points, for the purpose of expediting the method.

Regarding claim 22:

The rejection of claim 21 is incorporated, and further, this claim recites the additional limitation regarding a module for selecting and fixing instructions which corresponds to copending claim 3.

Regarding claim 23:

The rejection of claim 22 is incorporated, and further, the claim recites the additional limitation regarding a module for compiling an application program which corresponds to copending claim 4.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

16. Claims 12 and 13 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 2 of copending Application No. 09/510,217 in view of U.S. Patent 5,189,633 to Bonadio.

Regarding claim 12:

The rejection of claim 10 is incorporated, and further, copending claim 2 does not recite generating an efficient frontier curve of optimum solution points as claimed in instant claim 12. Bonadio discloses in an analogous solution deriving computer system the method of generating a curve of solution points (Note Fig. 5 and the corresponding section of the disclosure). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the curve displaying ability of Bonadio with the method recited in claim 2 of the copending application, as this would enable a user to easily view the variety of solutions that are recommended by the system recited in claim 2 of the copending application.

Regarding claim 13:

The rejection of claim 12 is incorporated, and further, Bonadio recites the use of a zoom window in conjunction with a graph ("to zoom in or out..." in col. 8 line 21)

Regarding claim 18:

The rejection of claim 10 is incorporated, and further, copending claim 2 does not recite displaying a solution point on a solution point curve as claimed. Bonadio discloses in an analogous solution deriving computer system displaying a solution point on a solution point curve, and redisplaying the results as claimed (Note Fig. 5 and the corresponding section of the disclosure. The user may "manipulate the internal structure of the graph" in lines 22-23, thereby requiring that the solution curve be redisplayed following manipulation). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use solution curve of Bonadio with the method recited

in claim 2 of the copending application, as this would enable a user to easily view the variety of solutions that are recommended by the system recited in claim 2 of the copending application.

Regarding claim 19:

The rejection of claim 18 is incorporated, and further, Bonadio discloses displaying by function differences between results as claimed ("to manipulate the internal structure of the graph" in col. 8 lines 22-23.)

This is a provisional obviousness-type double patenting rejection.

17. Claims 14 and 15 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 2 of copending Application No. 09/510,217 in view of U.S. Patent 5,966,538 to Granston et al, hereafter referred to as Granston.

Regarding claim 14:

The rejection of claim 10 is incorporated, and further, copending claim 2 does not recite said generating step including linear programming and heuristics as claimed in instant claim 14. Granston discloses in an analogous compiler recommendation system the use of linear programming and heuristics as claimed ("In accordance with the present invention, the rule sets were developed using performance-tuning knowledge...the rule set utilized by the present invention will depend on the particular application, or application type, being compiled" in col. 4 lines 27-34) It would have been obvious to one of ordinary skill in the art at the time the invention was made use the heuristics of Granston with the method recited in claim 2 of the copending application, as this would ensure that

the recommendations suggested by the system recited in claim 2 of the copending application system would conform to common performance-tuning knowledge.

Regarding claim 15:

The rejection of claim 10 is incorporated, and further, copending claim 2 does not recite generating possible solutions as claimed in instant claim 15. Granston teaches in an analogous compiler recommendation system said generating solutions step as claimed ("the rule set utilized by the present invention will depend on the particular application, or application type, being compiled" in col. 4 lines 32-34. The rules are what filter the recommended solutions.) It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the rule-based filtering of Granston with the method recited in claim 2 of the copending application, as this would ensure that the recommendations suggested by the system recited in claim 2 of the copending application system would conform to common performance-tuning knowledge.

This is a provisional obviousness-type double patenting rejection.

18. Claim16 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 2 of copending Application No. 09/510,217 in view of U.S. Patent 5,978,795 to Poutanen et al, hereafter referred to as Poutanen.

Regarding claim 16:

The rejection of claim 10 is incorporated, and further, copending claim 2 does not recite generating possible solutions as claimed in instant claim 16. Poutanen discloses a search tree with node

processing as claimed ("The string at the current position is then compared with the string at the previous position, and, if larger, the left pointer of the new root node points to the node of the previous position, and the left pointer of the node of the previous position is maintained so as to point to any smaller children..." in col. 2 lines 51-56). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the search tree processing method of Poutanen with the method recited in claim 2 of the copending application, as this would provide an improved binary search method, further increasing the performance of the system recited in claim 2 of the copending application.

This is a provisional obviousness-type double patenting rejection.

Conclusion

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trent J Roche whose telephone number is (703)305-4627. The examiner can normally be reached on Monday - Friday, 9:00 am - 6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (703)305-9662. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

Trent J Roche
Examiner
Art Unit 2124

TJR

KAKALI CHAKI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100